Challenges Forum
International Forum for the Challenges of Peace Operations

KAIPTC
...where peace begins

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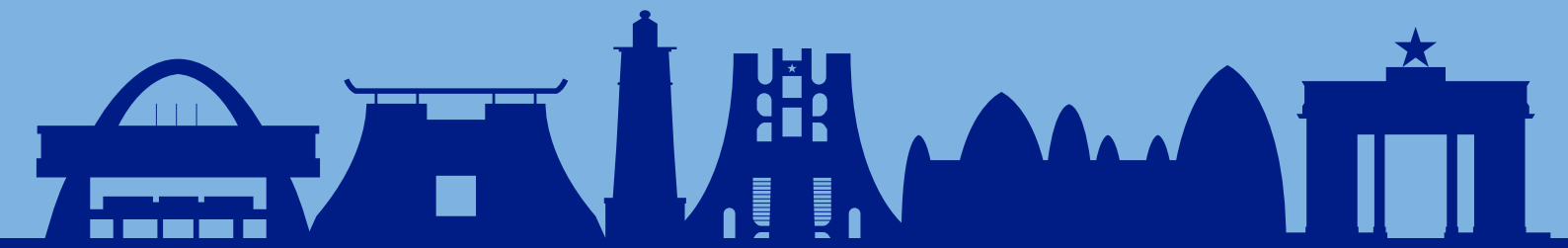
BACKGROUND PAPER

Leveraging new technologies to enhance effectiveness and efficiency of peace operations



ABOUT THE EVENT

The 2025 Challenges Annual Forum (#CAF25Accra) will contribute to the United Nation's Secretary General's Review of the Future of all Forms of Peace Operations by examining how conflict and instability are evolving, define key political and operational prerequisites for success, and generate concrete, innovative proposals to adapt and strengthen peace operations, with a particular focus on West Africa and the Sahel. The event is co-hosted by the Challenges Forum's Ghanaian partner, the Kofi Annan International Peacekeeping Training Center (KAIPTC), in Accra on 14–15 October. Challenges Forum is a global partnership that uses its convening power to generate innovative ideas and promote results for more effective peace operations.

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Emerging technologies offer the promise of transformative change to United Nations (UN) peace operations at a time when cost-cutting is shrinking mission footprints. These same technologies will become central factors in the legitimacy, credibility and trust missions hope to enjoy. The Review on the Future of All Forms of UN Peace Operations (the Review) must present a vision for technology in peace operations that both leverages its potential and charts a course for missions' championing of evolving normative and policy standards for its responsible use. Decisions around data governance, partnerships and digital inclusion will be core determinants of how peace operations act and are perceived to act, in the conflicts of the future.

Managing a new era of technological adaptation for UN peace operations

As the UN seeks to harness emerging technologies to modernise its peace operations and increase efficiency, these same tools are transforming the nature of conflict and adding complexity to systems of political violence.

As such, to meet the Pact for the Future's call for more agile, tailored responses, the Review will need to contend with the reality that digital tools shape not only operational capabilities, but also political legitimacy, inclusion and public perception of peace operations.

Technology as a vector of peace operations reform

Technology has always been a central feature of efforts to improve the effectiveness of peace operations. The Brahimi Report called for a dramatic shift in peace operations' use of data, proposing a systematic gathering and use of data to aid in conflict analysis, operational planning and training. The HIPPO endorsed the report of an Expert Panel on Technology and Innovation in UN Peacekeeping, which highlighted numerous opportunities for missions to update their operations using existing technologies to improve situational awareness, safety and security and workflows, but largely ignored the political and administrative processes that would be required to deliver them.

Under more recent, UN-wide modernisation efforts such as the Secretary-General's Data Strategy, the 2018 Strategy on New Technologies and the UN 2.0 initiative, an innovation cell in DPPA was established in 2020 to help DPPA and its field presences understand, explore, pilot and scale new technologies, tools and practices. It has since delivered several proofs of concept and scaled several use cases for digital technologies, such as a platform to support efforts to address climate-related risks using open-source satellite data to track water scarcity across regions like West and Central Africa.

Within DPO, a team was established to implement the 2021 Strategy for the Digital Transformation of Peacekeeping, as well as a dedicated capacity to strengthen information integrity and tackle mis/disinformation and hate speech. As the UN80 reform process unfolds and budget constraints persist, these cells may be called upon to accelerate the scaling of new digital tools to generate cost savings and deliver operational efficiencies. It is also likely that calls for greater coherence in technology and innovation efforts across the peace and security pillar will continue to grow.

External trends on the immediate horizon

Artificial Intelligence (AI) offers considerable opportunity to advance analytics that could leverage the large and unique datasets collected by missions, building on early successes piloted in several missions. Recent examples include dynamic mapping of displacement caused by flooding and resulting violence in South Sudan and Unite Wave, a big data radio mining platform

for the monitoring, transcription, translation and analysis of multilingual radio data collected at scale and supporting mission operations in the CAR, the DRC and Lebanon. AI tools could further help peace operations overcome persistent challenges in systematizing data analysis, including inconsistent data entry practices, weak data governance and disparate data structures. Indeed, current efforts to deploy AI tools within UN peace operations have largely focused on better leveraging existing data, improving workflows and accelerating information sharing. AI-powered communication tools could be scaled to drive inclusion in political processes by creating space for women's leadership, youth participation and the representation of vulnerable communities.

At the same time, the proliferation of AI-generated content, the growing use of social media coupled with the spread of mis/disinformation and hate speech risk complicating mediation and conflict resolution efforts. These same tools have been weaponized against missions themselves by actors wishing to undermine missions' legitimacy, as was experienced by MINUSMA prior to its closure in 2023. Overreliance on generative AI risks weakening missions' interpretations of events, reducing their ability to engage critically with national discourse and even causing them to inadvertently reinforce existing power asymmetries within societies and political systems.

Unmanned aerial vehicles have the potential to patrol long or inaccessible borders, or ceasefire lines, to support current and future peace operations and observer missions. However, the increasing use of small armed drones by insurgent groups in West and Central Africa and the Middle East and targeted internet shutdowns present serious risks for the security of local civilians and peace operations, while making attribution difficult for both the purposes of human rights monitoring and for the viability of ceasefires. The weakening of norms constraining the targeting of civilian populations, infrastructure and humanitarian operations with these weapons will place significant pressure on the protection roles of peace operations and mission leaders.

Considerations for a reform agenda

As peace operations acquire new capabilities in response to these trends, both deliberate strategic approaches and thoughtful internal organizational processes will be required to maximize the positive impact and mitigate the risks of new technologies, including in the following areas.

Data bias and exclusion. The concentration of dominant AI systems in the United States inherently biases the data inputs, reasoning processes and prescriptive outputs of the tools built on these systems. Uncritically adopting these tools is likely to bias UN early warning systems, skew aid distribution and apply poorly contextualized gendered and cultural assumptions. However, if thoughtfully engineered, AI could enhance and nuance peace operations' awareness of local perceptions and identify vectors for more effective strategic communications, while reducing internally focused reporting and drafting burdens.

> *"AI could enhance and nuance peace operations' awareness of local perceptions and identify vectors for more effective strategic communications"*

Partnerships and engineering. The design of tailored technological solutions for UN peace operations has often been managed through partnerships with large Western technology companies. These partnerships have ranged from standard collaboration to more ethically dubious data sharing agreements with defence contractors. As these tools become increasingly consequential, the partnerships and procurement processes that underlie them will become more important to the levels of trust that peace operations enjoy within the international community and among host states. AI tools that promise improved "targeting" for protection of civilians operations, for example, may also have been used to commit atrocities in other theatres. These decisions will inevitably invoke questions of host state consent and sovereignty, especially for monitoring and surveillance tools.

Local frameworks of innovation: Peace operations inevitably impact the economic and entrepreneurial environments in which they are deployed. In the technology field, this influ-

ence could be positively leveraged by working with local universities, start-ups and research institutions to foster contextually relevant tech designs and enhance local ecosystem ownership. In doing so, peace operations could bolster local innovation, reduce dependence on Western technology firms and more meaningfully prioritize community needs, all while fostering relationships of trust.

> *"Training should include a strong focus on responsible AI, information security and data governance."*

Capacity building: There is a strong need for more investment in the development of specialised data expertise within missions and, more broadly, building digital skills for all mission personnel and for their national and regional stakeholders. Training should include a strong focus on responsible AI, information security and data governance. Local capacity-building in these areas would increase resilience to mis- and disinformation and cyber threats, while enabling local communities to actively participate in shaping technological tools used to support peace processes.

Resisting digital colonialism: The speed of technological change and the impetus to modernize UN peace operations risks that intrusive data collection tools, insecure online platforms and immature data sharing and protection mechanisms could be rolled out without sufficient contextual understanding, risk analysis and appropriate safeguards. The uncritical uptake of powerful-but-nascent technologies by peace operations may risk that host populations become the test grounds for the political, social and ethical consequences of emerging technologies.

Ethical frameworks: Boundaries are required for how UN peace operations can deploy emerging technologies, including AI, but less clear what form these may take in practice on the ground. The Chief Executive Board's Principles for the Ethical Use of AI, the Secretariat policy on data protection and the UN's Responsible Technology Playbook provide a strong framework for the use of digital technologies in compliance with human rights norms. However, the mechanics of ethical governance, such as impact assessments, due diligence processes and accountability mechanisms remain nascent.

Guiding questions

- 2035 Vision → How would technology-enabled peace operations transform engagement, protection and effectiveness by 2035?
- Near-Term Actions → Which policies, norms, or guardrails must be established by 2027 to ensure AI and other new technologies are used responsibly and effectively by peace operations?
- Capabilities & Risks → What new skills, tools and safeguards will peace operations need by 2030 to manage both opportunities and threats for international peace and security in the new technological era?

ABOUT THE AUTHORS

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